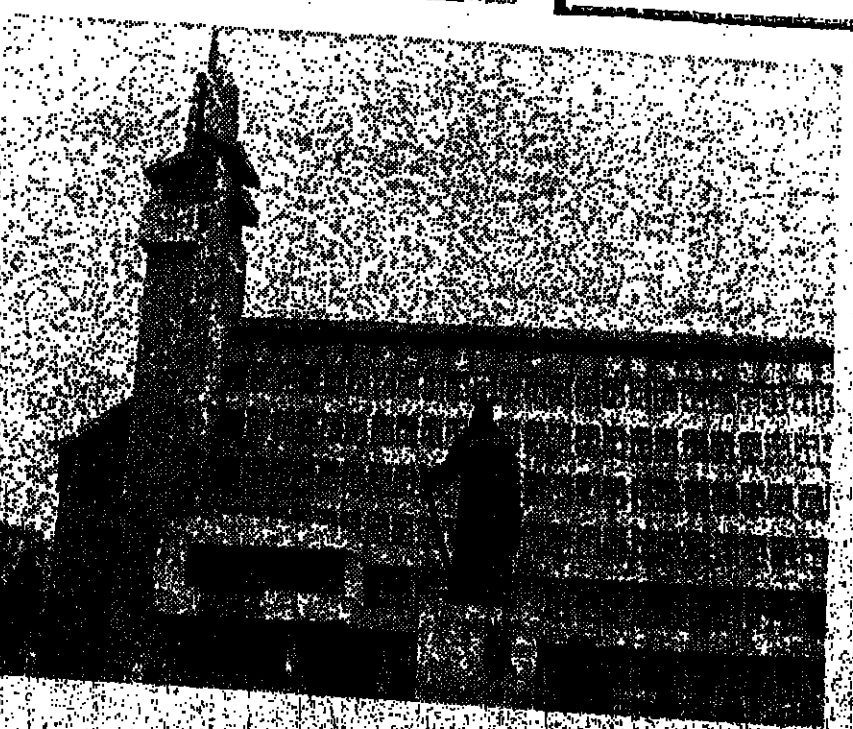
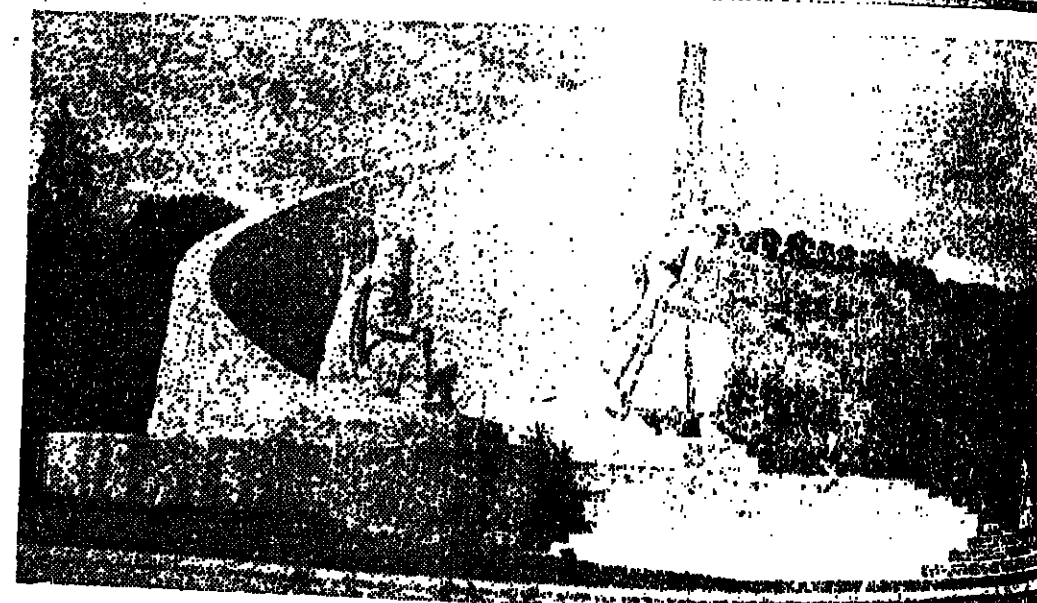


A fine arts renaissance in great favour with the public, concentrating attention and channelling intellects towards a major idea is 'monumental art'. Romanian history, its great moments have been a permanent source of inspiration for monumental sculptures. Numerous works erected in many of Romania's localities have largely contributed to reshaping the environment in an aesthetic way. Of them, we should mention: the Memorial of Heroes in that village, martyrs of the struggle against fascism and Horthyism; 'Independence' by Gabriel Manole Ador and Tulcea; 'Stephen the Great' by Iuliu Bărbulescu, in Suceava and Vaslui; 'Michael the Brave' by Oscar Han, in Alba Iulia; 'Michael the Brave' by Marin Butulescu, in Cluj-Napoca, and 'Avram Iancu' by Emil Mureanu at Bala de Cris; 'Stephen the Great' by Mihaela Stefanescu and 'Petru Poni' by Paul Vasilescu in Suceava. 'Ion Voita' by Gheorghe Turcu, at Rasnau as well as a long series of monuments to the Romanian soldiers erected in Bala Mare, Paltin, Slatina Gheorghe, Romania. Their lives for social and national justice. Monumental art is thus closely related to the people's life, being a vast area of usefulness and flourishing and enjoying broad social resonance.

PAUL ANTIM ■

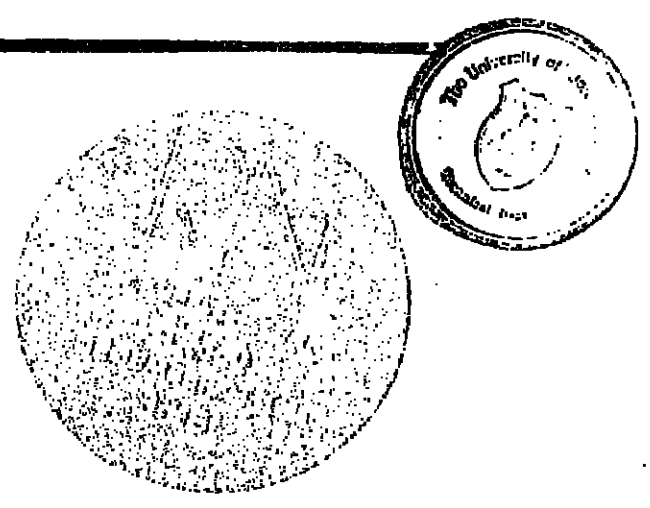


In photos: top left - the Phila Monument; bottom left - 'Michael the Brave' in Tulcea; top right - Statuary Complex at Oradea; below - Sculptural Ensemble at Dealul Florilor; Bala Mare; middle - 'Stephen the Great' - Vaslui; middle - 'Stephen the Great' - Vaslui.

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ROMANIAN NEWS



TIES OF FRIENDSHIP AND COLLABORATION ON PRESIDENT NICOLAE CEAUȘESCU'S INVITATION, THE PRESIDENT OF YUGOSLAVIA'S PRESIDIIUM, RAI DIZDAREVIC, PAYS AN OFFICIAL FRIENDLY VISIT TO ROMANIA

At the invitation of the General Secretary of the Romanian Communist Party, President of the Republic, Nicolae Ceaușescu, the President of the Presidium of the Socialist Federal Republic of Yugoslavia, Ralf Dizdarevic, arrived in Bucharest on Thursday, December 22, on an official friendly visit to Romania.

The new Romanian-Yugoslav summit falls in line with the rich chronicle of the traditional meetings between the two countries' party and state leaders, which have on every occasion contributed to the expansion of the bilateral relations of friendship and collaboration.

This was actually underscored during the first round of talks by President Nicolae Ceaușescu who hailed the official friendly visit paid by Ralf Dizdarevic to Romania and voiced his satisfaction at continuing the traditional Romanian-Yugoslav summit dialogue, a factor of highest significance for strengthening the bonds of friendship and cooperation between the two countries and peoples.

In his turn, President Ralf Dizdarevic thanked for the invitation to visit Romania, for the hospitality extended to him and expressed satisfaction at meeting President Nicolae Ceaușescu and analyzing together.

(cont. on p. 3)



**HOLIDAYS
IN A WINTER SCENERY**

Over December 28, 1985 - January 3, 1986, the 'Winter Free' celebration will be organized. Substantial funds have been earmarked for this traditional celebration.

(PAGE 7)

EYEWITNESS

A MODERN MINE

(PAGE 10)

LOW-CONTENT MINERAL RESOURCES

(PAGES 4-5-6)

the possible wide range of national and international world relations cannot be established without settling one of the fundamental questions of the contemporary world — the situation of the large number of developing countries. The conditionality of mankind's progress in general and of the settlement of the international relations of the developing countries, the foreign debt one, in particular, are regular which have to be taken into consideration in the international relations and in the prospects of development in the world are great challenges for all countries — political, economic and social. In the way-mind struggle with these new trends, by reexamining the conceptions and ways of economic development, the world must find a global balance, the main factor of international politics, purposes to adjust the relations in the changing international environment, to create a new world order, to be determined by the will to become in the following period a more influential power and supporter of the peaceful development of the world.

In conclusion, the development in economic life, which the socialist and the capitalist world would be a strong stimulus for the promotion of the economic and social progress of the world and the relations between the socialist and the capitalist world.

LOW-CONTENT MINERAL RESOURCES

A NEW OUTLOOK ON MINERAL RESOURCES • AN ORIENTATION IMPOSED BY THE REQUIREMENTS OF ROMANIA'S ECONOMIC DEVELOPMENT • AN EXAM PASSED SUCCESSFULLY BY SCIENTIFIC RESEARCH AND INDUSTRY • A LONG-TERM POLICY REFERRED TO THE OBJECTIVE SITUATION OF THE NATIONAL MINERAL PATRIMONY • A ROMANIAN SCHOOL IN THE FIELD OF TECHNOLOGIES TURNING TO ACCOUNT LOW-GRADE ORES • DEVELOPMENT MOSTLY BASED ON HOME-GROWN RESOURCES

In the heart of the Apuseni Mountains, two mountains which were apparently determined to defy eternity were chopped down. The peaks of Cărmăruș (1,205 m) and Rugina (1,256 m) were shortened by a few scores of meters. And their altitude keeps on decreasing. Several scores of million tons of rock shattered into pieces by dynamite filled the gaps of the surrounding valleys. The mountain rock is removed and underneath lies an enormous deposit of copper ore. A low-grade deposit which nevertheless will provide copper for many decades to come. But in order to bring that copper to light, over 100 million tons of gangue has to be uncovered, transported and deposited in stockpiles.

The over 4,000 people who took to building the Copper Mining Works of Roșia Poieni were faced with a hardly accessible place (over 100 km of road had to be laid out in order to ensure access ways) and with difficult weather conditions: long winters with heavy and frequent snowfalls, fog, strong winds and torrential rains. Difficult questions had to be solved concerning the industrial construction and several technologies. Many machines and tools were tested and put to work here for the first time in Romania, as an outcome of the collaboration of many research institutes and machine engineering enterprises.

Now an immense amphitheatre opens between the Cărmăruș and Rugina Mountains: the Roșia Poieni Openpit. The mountains have been moulded in steps and terraces providing conditions of safety for the mining works.

The Roșia Poieni mining works delivers copper concentrates. The ore extracted from the openpit is processed by the preparation plant partially commissioned as early as 1984. This year, the neighbouring town of Zlatna saw the commissioning of a copper refining plant.

A NEW MAP OF MINERAL RESERVES

About 40 years ago economic geography guides and text-books presented Romania as a country possessing significant resources of mineral substances. Was it an excessively optimistic outlook? Today we may incline to answer affirmatively, but then it was determined by the needs of the national economy of the 1930s.

The development and diversification of the Romanian economy over the last decades had rapidly changed the out-

look on mineral riches. Soon, the already known deposits proved insufficient: Romania had to resort to imports in order to meet at least part of its need of mineral and energy raw materials. But that does not mean we should fall into the other extreme. Romania is definitely not poor in mineral resources! After making a thorough investigation of the country's subsoil, geologists consider that Romania is a country aboun-

Does the metal lying in the womb of the mountain deserve such efforts?

Was it really worth while opening a mining exploitation in that place taking into account the enormous difficulties which had to be overcome?

Yes, we can answer affirmatively with all conviction. For the country's economy copper is as valuable as gold.

The spiralling development of certain high-tech branches such as the power and the electronic industry demands an increasingly larger quantity of copper. Irreplaceable in the structure of many machines and instruments, copper gets more precious and desperately sought by the hour. The growing need of copper in the world, its inclusion on the list of strategic materials by a series of developed countries have caused its price to shoot up, making it increasingly dear and hard to find.

The daring project of Roșia Poieni which in a few years became the copper mining works of Roșia Poieni, has been imposed by the requirements of development. And it proved entirely feasible with the forces possessed by the country's scientific research and industry.

DOSSIER

ing in low-grade ores. It has a multitude of noteworthy reserves, yet of a rather modest quality (this is the case of coal or with scarce contents of metals). In fact this is the consequence of a prolonged exploitation (over 100 years in the case of oil) which has worn down deposits.

Even if their exploitation is carried out in more difficult geological and mining conditions, requiring bigger investments, it is far more advantageous than the import of such materials whose price continues to climb.

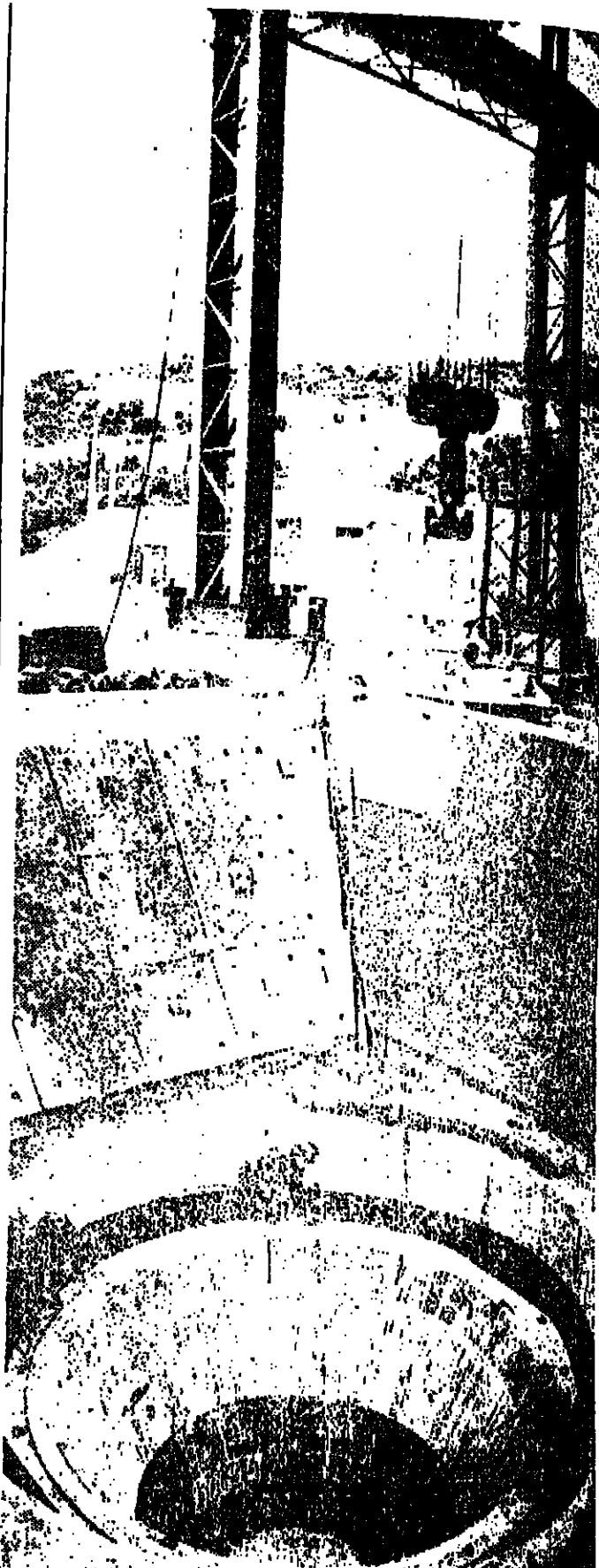
The age of cheap industrial raw materials is over. Everywhere in the world high-grade mineral reserves (specialists call them "ideal") with a large

concentration of useful elements, located in accessible areas, which require little small transport expenses, less manpower and ordinary equipment and preparation technologies have already been assuaged and mostly exhausted.

The natural factors determining the economic efficiency of exploitation have worsened. Depths are growing bigger, layers and veins are getting thinner, contents of useful elements weaker, deposits are sit-

ted in hardly accessible areas. Consequently, extraction and preparation technologies become increasingly more complicated.

The photos were taken at Roșia-Poieni: assembly of the ore crusher (top) and the copper openpit (bottom).



SUSPENDED CONVEYOR

A new type of conveyor belt has been introduced (for the first time in Romania) and is being generalized in the galleries of the Ciampulung Mining Enterprise. It is the patented invention of engineer Petre Juhăneanu, one of the enterprise's experts.

The conveyor belt has a rigid structure consisting of three 3-m-long metallic modules whose component elements are welded together. Unlike the ordinary type, it is suspended from the ceiling of the gallery. Below, materials can be stored and people can move without restriction. The modules are kept coupled together and the equipment is kept in operation continuously, until the rubber belt needs to be replaced. Through an ingenious roller system, the belt is automatically centred and the risk of deterioration is reduced. The modular structure makes it easier to shorten the conveyance circuit. Substantial economies of manual labour and spare parts are thus made, while the volume of maintenance and overhauling operations is cut.

The abundance and low price of mineral raw materials did little to stimulate the thinking and investment efforts of searching and turning to account "difficult" deposits.

But the waste of high-grade ores has caused a recess in the exploitation of the benefit of previously neglected exploitable ores.

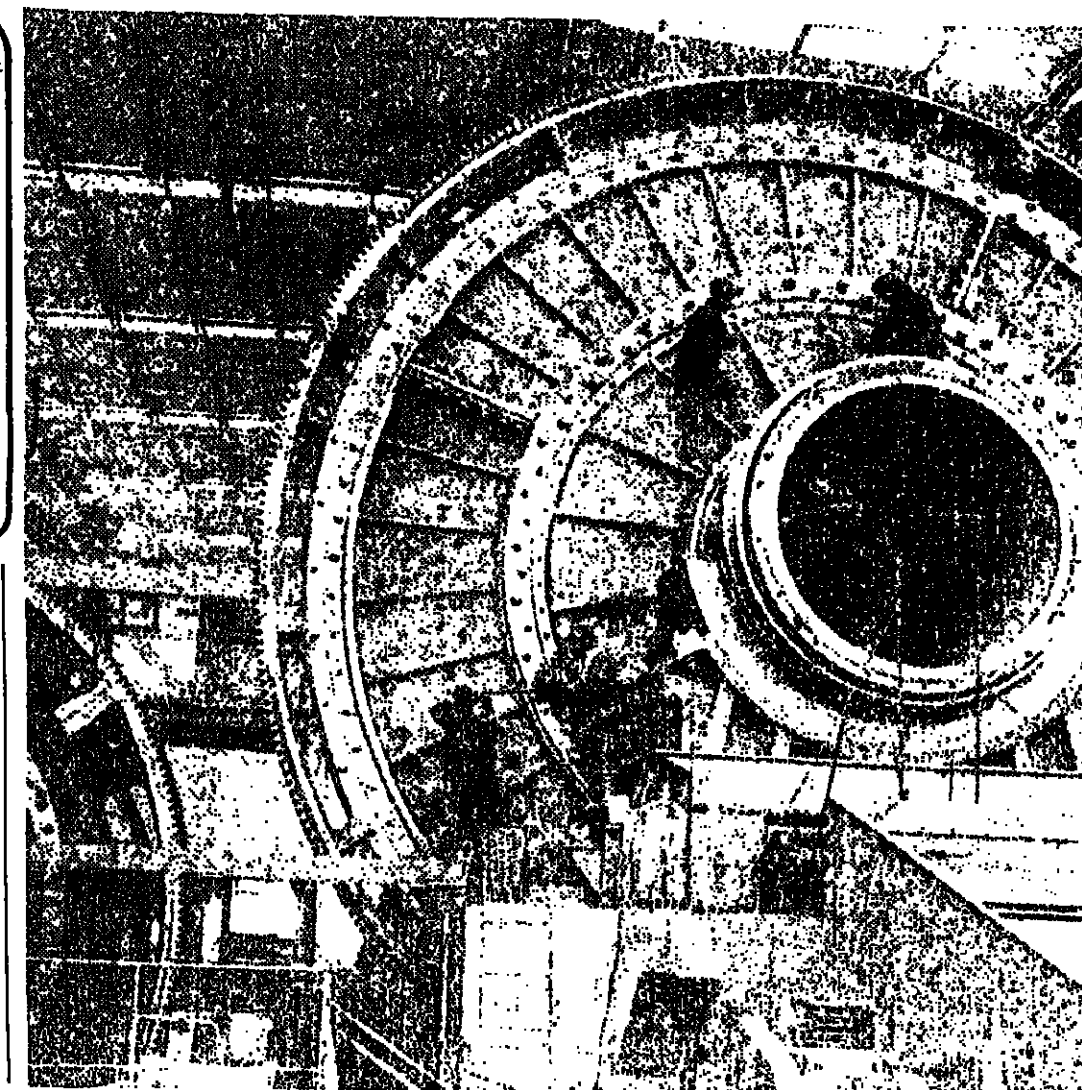
Deposits "shelved" non-economic and sterile two or three decades ago are now reassessed. For instance, exploitable is considered to be also a copper ore with a content of only 0.4 per cent in subsoil and of 0.25 per cent in openpit. In the past, the world average rate used to be 3 up to 5 per cent and what was rated below 2.5 per cent never reached the list of reserves.

The passage to the use of low-grade and hardly accessible reserves, as well as reprocessing

for the settlement of multiple technical and economic problems raised by their superior capitalization demand great scientific and financial efforts.

Reducing costs for the exploitation of the existing mineral resources have grown. A several-times increase has been recorded both by the prices of prospects for the discovery of new deposits and by the investments required by updated technologies able to turn them to account.

The rise in the price of mineral resources demands the adoption of new conceptions and practices in their exploitation and usage. All states have to adapt themselves to this irreversible evolution in establishing the strategy of their economic growth and foster their scientific and financial efforts adequately and in due time.



COKING PIT COAL

The Bala Nouă Mining Enterprise has started exploiting a coking pit coal deposit. Located in south-western Romania, in Mehedinți county, the Bala Nouă coalfield was known only for the extraction of fuel coal and of non-metalliferous ores. The only area in Romania from which coking pit coal was extracted was the Jiu Valley.

The opening of the new pit coal mines falls in line with the Romanian policy of stepping up the research and capitalization of all resources, the low-grade or less accessible ones included. On the other hand, the breathtaking development of the Romanian iron-and-steel industry has brought about growing needs for raw materials in coke-producing plants.

A BETTER CAPITALIZATION

Romanians toyed with the idea of turning to account low-grade ores for quite a while. The economic policy guidelines for this field, materialized throughout this decade, had been drawn up before. 1972-1976, when the first symptoms of the world crisis of raw materials and energy were felt.

And before long, in 1967-1968, time was right for their capitalization, too. In the 1960s, the mining exploitation unit of Lăpuș-Ureus had come face to face with an apparently unsolvable situation: polymetallic ores with a fine interlocking (intertwined) of minerals, chalcocite with pyrite) extracted from the third area of the deposit could not be prepared. The mining unit contacted many prestigious foreign firms but none of them was able to come up with an adequate technology. The best

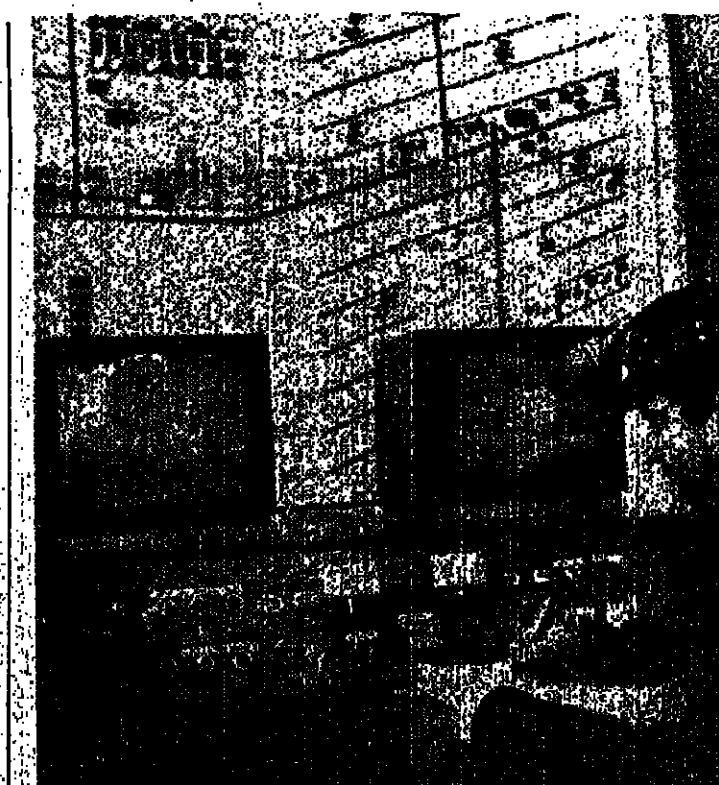
profitable prospect as a mining investment. But taking into consideration the huge quantity, as well as the fact that this type of ores had a constant content of copper, a special programme was worked out for the geological and technological research into such ores.

And before long, in 1967-1968, time was right for their capitalization, too. In the 1960s, the mining exploitation unit of Lăpuș-Ureus had come face to face with an apparently unsolvable situation: polymetallic ores with a fine interlocking (intertwined) of minerals, chalcocite with pyrite) extracted from the third area of the deposit could not be prepared. The mining unit contacted many prestigious foreign firms but none of them was able to come up with an adequate technology. The best

solution was found here, in Romania: copper should be taken out before lead and zinc. Researches materialized into an absolutely new technology, conceived as an invention both here and abroad: the selective-collective flotation of float, concentrate polymetallic non-ferrous ores. The quality of non-ferrous metals increased. The efficiency of the metallic ore extraction increased, too. First of all, the technology was applied at Lăpuș-Ureus and at Bala Nouă. But it opened broad prospects also for the capitalization of other deposits.

In 1967-1968 technologies for the preparation of the Bala Nouă deposits were developed. Four variants were worked out for four different concentrations of useful substances. The technology proved profitable even for 0.5 per cent (in the conditions of the then lowest cost of a ton of copper).

In the 30 years which have passed, a school with a high experience in the field of technological mining in low-grade ores has been developed in Romania.



Photos: On page 4, views from the copper ore preparation plant (top) and from the copper openpit (centre) related to the unit IV at work at Roșia mine, Mehedinți county. On page 5, the Bala Nouă openpit (top, left), the Zlatna Metallurgical Enterprise (top, left and bottom), the Zlatna Metallurgical Enterprise of Mehedinți Metals (centre).

At the Husnicleara openpit in the Mehedinzi coalfield, a new gigantic excavator belonging to the family of bucket-wheel excavators built by the Romanian Industry for openpit miners has started being tested. It is the fourth machine of the kind equipping the Mehedinzi coalfield — the youngest in this country. A few years ago, the first Romanian excavator of the kind — ERC 1400 — was put in service here.

The Mehediñi coalfield has been a true testing-ground for this coal-extracting plant. And, through their suggestions for improving the machines and enhancing their reliability, the assemblers, engineers and foremen who set these giant going can be considered co-authors of this modern Romanian mining machine. The newcomer in the Husniceni open-pit excavator family has included all these suggestions in its construction.

11-11-1964



Until not long ago, lignite layers under two metres thick would not be exploited. In keeping with designs worked out by the Mining Research and Design Institute in Cracovia, the Mining Enterprise at Hlupogostil de Pădure has built the first two mechanized plants for thin lignite layers (ranging between 1.4 and 2.2 m) in two constructive variants. In the CMA-PL variant, such a mechanized plant has been mounted in the layer 6 No of Lourda mine of the Motru mining works, where it successfully replaces the CMA-3 mining machine. The other variant — CMA-2T — has yielded good results at the Zeguzani mine in the Mehedinti coalfield, being perfectly adjusted to the specific conditions of ore deposits there. At present, CMA-2T is introduced at the Sinerchia mine of the Anina Mining works.



A black and white photograph of a large industrial facility, likely a steel mill, with multiple buildings and a tall crane. A body of water is in the foreground, and a small boat is visible.

earmarked in Romania for the discovery and geological analysis of low-grade deposits. Answering a priority commandment of the national economy, specialists have found and keep on searching various solutions in order to turn ores to better account: They create equipment and technologies able to counter-balance the effects of increasingly bad ore conditions. The requirements of the national economy have determined

ed the elaboration of an economic policy in the field of minerals, a long-term not conjunctural policy-addressing the objective situation of the national mineral riches. Through its decisions, it facilitates the introduction of low-grade ores in the economic circuit. With every passing year the native mineral substances augment their contribution to meeting the internal needs. Certain needs have already been met.

All needs are to be met in coming years, creating export availabilities for as many useful mineral substances as possible.

In this way too, Romania fills a fundamental role set by the Ninth Congress of the Romanian Communist Party to develop mainly on basis of its own resources.

In parallel with the expansion of the mechanized digging of mine galleries with the help of advancing combine machines, means of mechanizing the assembly of gallery supports — that is metallo arches and reinforced concrete prefabs — have been introduced at the Jia Valley and Molru coalfields. The machines developed to this end have a holding force of 500 and 1,000 k.

Recently, a gangue dumping machine has been introduced as a national first at the Lugoulu open-pit of the Motou mining works. The machine, having a 170-m dumping arm, has already yielded good results. The dumping machine used in open-pits so far had a barely 60-m long arm.

The introduction of this machine, by 7 km. the distance on which the resulting from the uncovering of coal are transported. This accounts for a 50 per cent reduction of transporting and unloading expenses.

For a few months now, at the of the Motru Mining Enterprise, the Filipogel de Pădure mine va county), the supporting operation intersection of the working face with separation galleries have been. Moreover, the adjustment of certain of fastening the coal face by the aided cutting machines prevents the large blocks of lignite.

A holiday camp for high school pupils is due to be opened at Capriana, Dimbovitza county this year, we were informed by Gabriela Poheazda, from the tourism department of the Central Committee of the Union of Communist Youth.

The new camp, endowed with the adequate equipment for a winter spa, will be able to host two batches of 400 pupils each. The campers were recruited from all over the country on the basis of their results in school contests by subjects and in the pupils' sessions of scientific papers.

They are expected to hold heated debates on controversial scientific themes for which they have already shown real aptitudes.

Similar camps will be organized in parallel in the other countries, too.

Moreover, holiday clubs will be opened in high schools and cultural establishments.

VOINEASA AND THE CHILDREN

Vulneasa resort in the Lotru Mountains (Southern Carpathians) has recently become a fine host for holidaying children.

As professor Tullian Ghiteanu, commission head within the National Council of the Pioneers' Organization, told us, Valdeasa will be this winter town a centre for the all-country informatics camp. For this purpose electronic computers and the necessary programmes have been acquired for a large number

A sports camp, "Olympic Hopetuls", will exist in the same resort with an eye to the future competitions in Barcelona.

More than 1,200 children will take part in these national activities.

LAST-MINUTE NEWS

We have learned from organizers that :

In Izvoru Mureșului, Pirlau Rege and Cimpulung Moldovenesc resorts skiing lessons will be offered over December 17, 1938-February 23, 1939 by instructors certified by the Romanian Skiing and Slating Federation. Both young people from Romania and those coming from abroad can enroll in these courses which last seven days each. Each series of lessons ends with a competition. The top three placers will be awarded prizes. The others will be happy that they can ski and receive the BTI badge.

Natural skating rinks will be created during the winter holidays, weather permitting (so far, the signs are encouraging).

A special camp will simultaneously be staged at the Cimpulung Moldovenesc complex, which will schedule competitions in the main season sports: alpine skiing, cross-country skiing, biathlon.

Each resort will feature its own special artistic and discotheque programmes, and the traditional youth's New Year's Eve parties.

LAST-MINUTE NEWS

The children's holiday camps in all Romanian mountain resorts will comprise some 50,000 schoolchildren under 14.

During the winter holidays, camps by various subjects of study will be organized. Apart from specific winter recreational activities the children in these camps — who are the best of the respective subjects — will be given additional training with a view to their participation in the higher places of the mathematical, physics, chemistry, foreign language and literature, history etc. school contests. Very much as in past years, the future winners of international school contests will probably be selected from among these children.

Two hundred thousand children will go on trips to the Prahova Valley and other mountain regions.

Holiday clubs will be open in all general schools. Their programme, drawn up according to the children's preferences expressed in a survey, will include many attractions: scientific, artistic, cultural, artistic, sports, entertaining activities.

At the holiday club organized at the Palace of Pleasure and Homeleisure Palace in Bucharest, children will carry on over 100 activities daily.

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kg/cm² 510°C (fuel: brown
coal); 55 t/h steam, 198
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filters (diam. 2,000 mm) ● salt
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tal and vertical tanks for 111°C
and NaOH (diam. 1,200–3,100)
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1,200–2,000 mm) ● stainless
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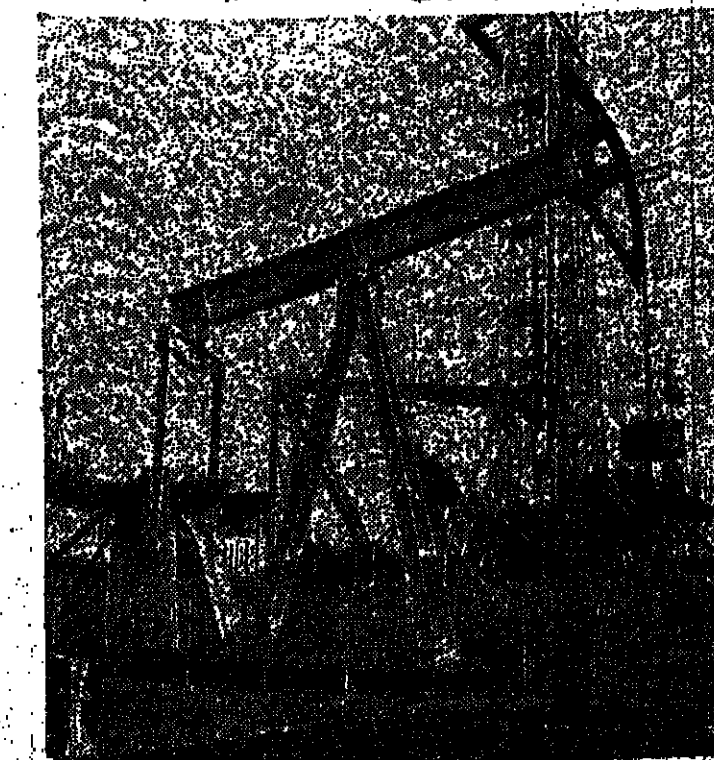
1–25 cu.m.) ● air tanks for 8.10
and 16 atm (diam. 1,000–2,000
mm) ● 1150°C horizontal and
vertical tanks (diam. 1,200–3,100

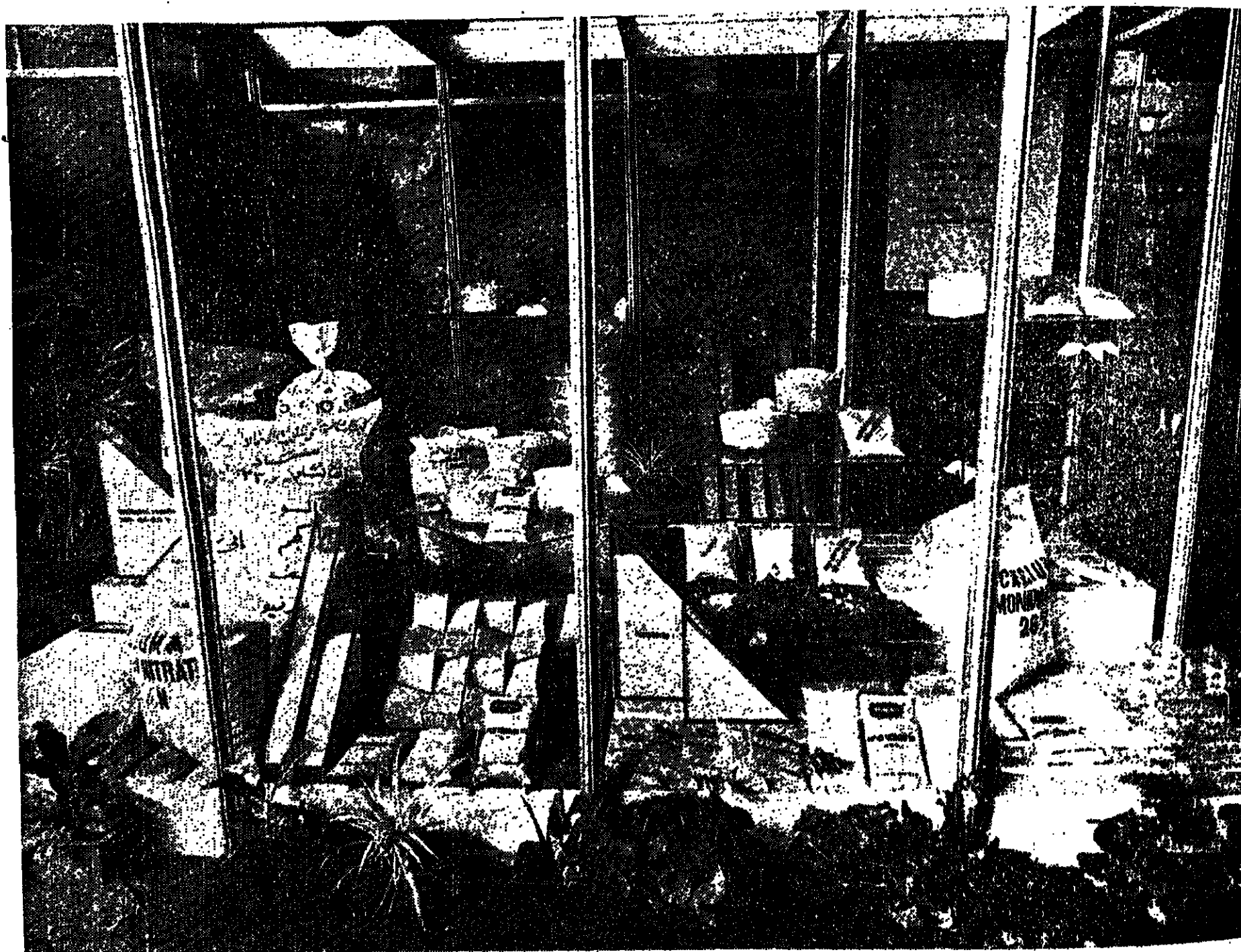
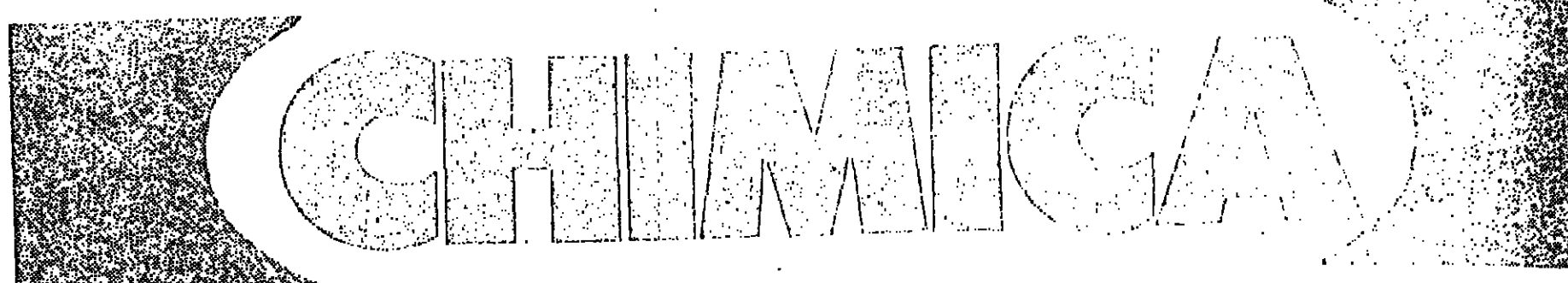
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CHIMICA IN THE WORLD

ICE Chimica's export list covers over 170 groups of products.

This wide range of chemical products are marketed through economic relations with more than 100 commercial firms in 71 countries.

The products exported by ICE Chimica are remarkable by their competitiveness, high quality and continuity in the foreign markets. ICE Chimica, which is one of the world's top exporters of fertilizers and holds an important place in the exports of medicines, cosmetics, varnishes and dyes, paper, cardboard and items made of them, has become a familiar presence in international trade.

Among the products which are in great demand in the foreign markets we are mentioning: nitrogenous

fertilizer, complex fertilizer (nitrogenous, phosphatic, potassic), writing, printing and newsprint paper, wrapping paper, various paper and cardboard items, original and traditional drugs, cosmetics, varnishes and dyes, dyestuffs and other products.

ICE Chimica is a partner of three joint trade companies: AMROCHEM - USA, ROMITAL - Italy, CON-TICHEMIE - West Germany, which also contribute to the marketing of the enterprise's products.

Moreover, our enterprise offers merchandise to other joint companies with Romanian membership such as: ARCODE - England, DECOFRA - France, VICTORIA REIFEN - West Germany, YERHELLAS - Greece, SOMAROMIMPEX - Morocco.

For additional information please apply to:



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FASHION ROMANIAN STYLE

ARPILEX Foreign Trade Company is the sole exporter of Romanian leather goods - footwear, gloves, fancy leather goods, travelling bags, suitcases and the like, leather and fur garments - and supplier of raw materials - all kinds of furs and tanning chemicals - to the Romanian leather industry.

ARPILEX engages in trade on all continents: it has commercial relations with over 300 companies in more than 40 countries.

Every season we can offer you a wide choice of goods you certainly need.

IN WINTER

Velvet sheepskins, fur caps, expensive fur coats, high boots for men, women and children, ski boots, skate shoes, thick lined leather gloves.

IN SPRING AND AUTUMN

Leather garments - shirts, pants, jackets, coats - gloves, fancy leather goods, shoes for men, women and children.

IN SUMMER

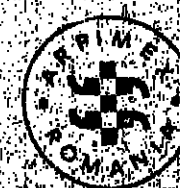
A wide range of sport shoes, gloves and bags to go with them as well as horse-riding leather goods - from saddle and harness to everything a rider needs.

A full travelling set for your holidays and a wide choice of light summer footwear, both casual and elegant.



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ELECTRONUM YOUR SAFEST BUSINESS PARTNER

Marketing Romanian electronic products and services as well as economic cooperation in the field of the electronic industry are carried out by the ELECTRONUM foreign trade enterprise.

ICE ELECTRONUM'S export programme includes the following lines of products:

- Telecommunication apparatuses and equipment, servicing included, starting from design up to training and maintenance. From this line of products mention should be made of: telephones, urban, interurban, international and institutional automated telephone exchanges. Exports of such products to Greece, the USSR, Czechoslovakia and the GDR have become a traditional practice.

- Measuring and control apparatuses, of which ampermetres, voltmeters, wattmeters, electric metres, flow-metres, steam-flow metres, logometres are delivered to Poland, Syria, Iraq, Pakistan, Sudan, the GDR and Czechoslovakia.

- Automation elements, equipment and installations for all the economic and social sectors.

We shall enumerate some subgroups of products: field and panel automation equipment, distribution and control electrical equipment, automated equipment and systems controlling technological processes in all economic branches, transmission and data processing equip-

ment, teletransmission and data processing equipment, machine tools, control equipment, automated testing equipment.

Also on offer are personal installations and equipment as well as turn-key deliveries. Increasing are the deliveries to countries such as the USSR, Egypt, the GDR, Czechoslovakia, Iran, Iraq, Bulgaria.

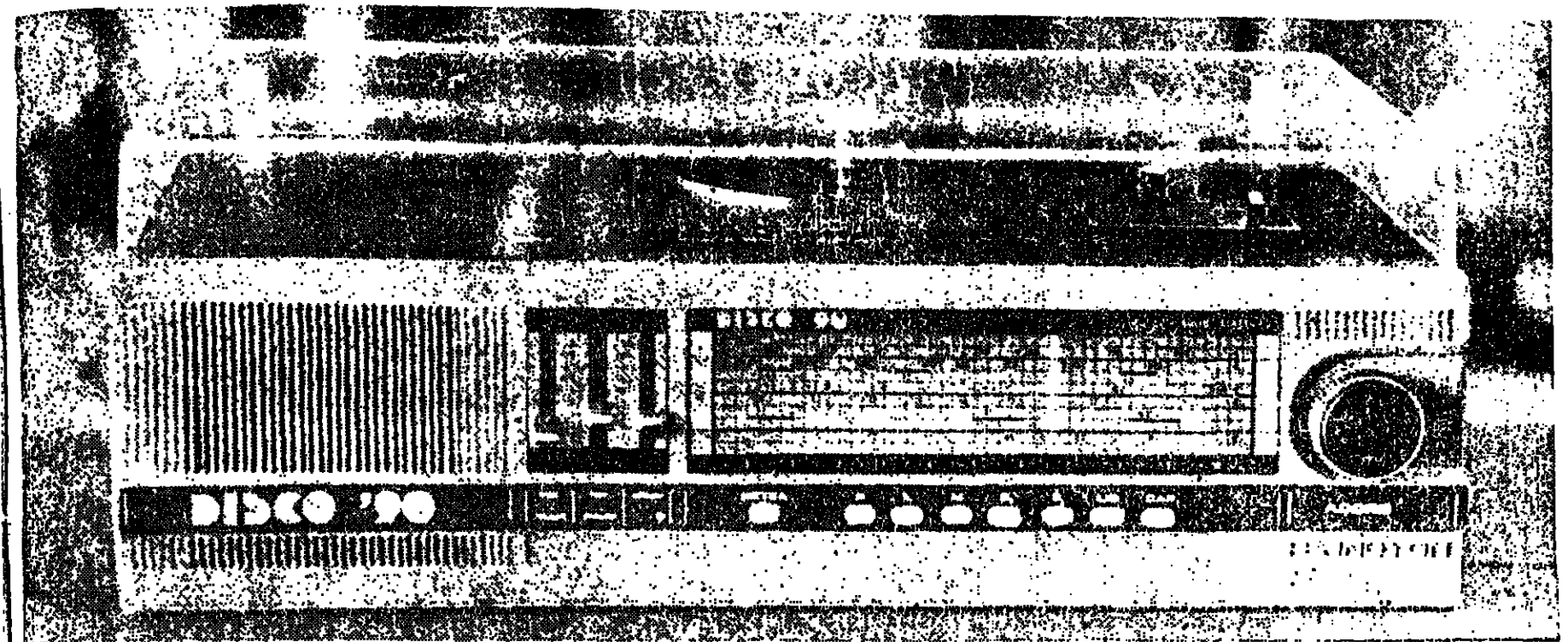
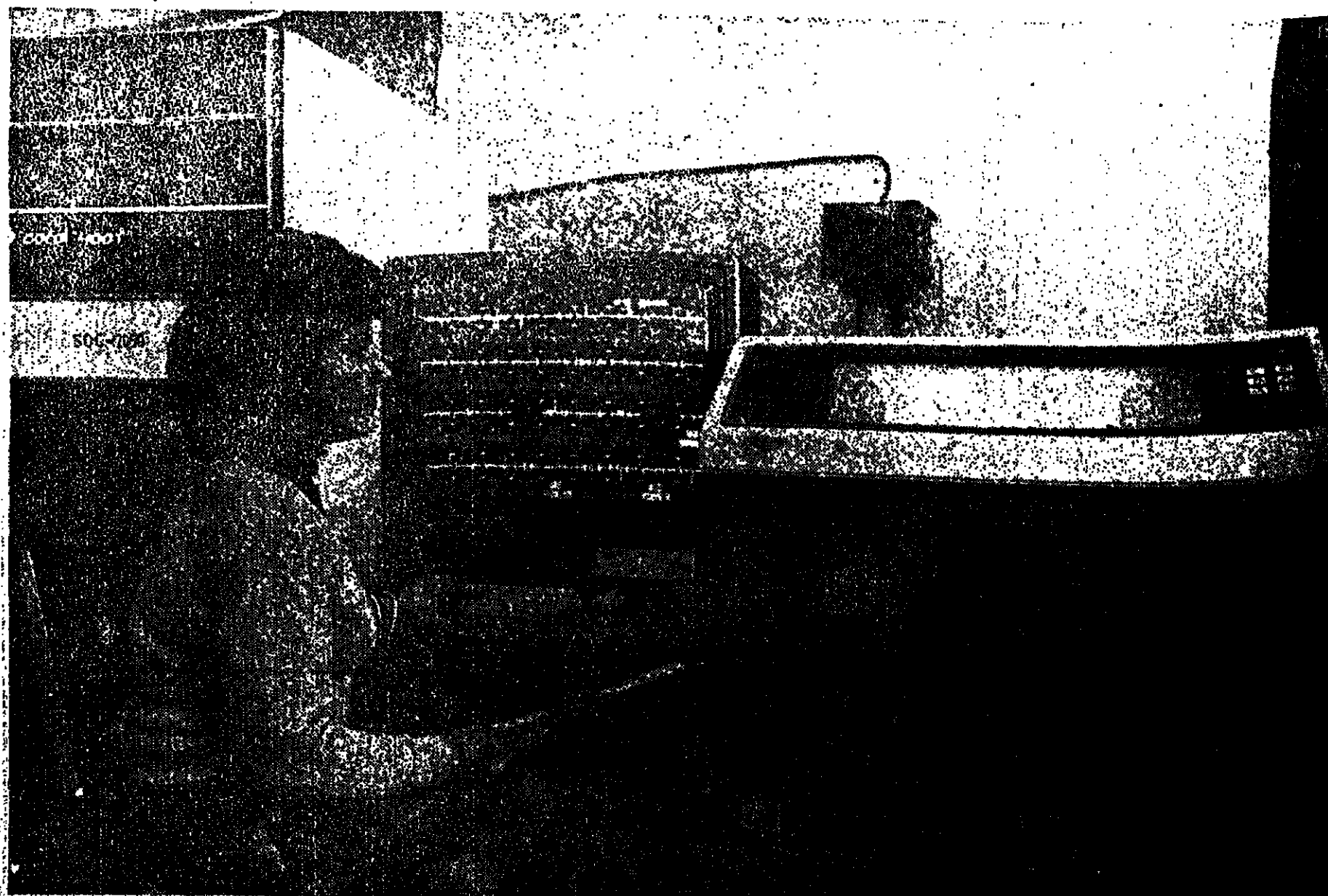
- Computer technology equipment such as: medium-capacity computers, minicomputers, microcomputers, personal computers, graphical systems, invoicing and bookkeeping machines, peripheral equipment. These products are exported to People's China, Czechoslovakia, the USSR, the GDR, Switzerland, Austria, West Germany, the USA.

The electronic components cover a wide range of diodes, transistors, integrated circuits, resistors, condensers, etc and are exported to Bulgaria, Czechoslovakia, the GDR, Poland, France, Italy, the United States etc.

Consumer goods such as radio receivers, radio cassette recorders and tv sets. These products are exported to countries such as West Germany, Britain, the Netherlands, Czechoslovakia, the GDR, the United States.

Also taking place through ICE ELECTRONUM are the export of licences and knowhow, the granting of technical assistance and software.

ELECTRONUM
BUCHAREST - ROMANIA



ICE ELECTRONUM imports a series of equipment, apparatuses, electronic components and various materials for the electronic industry and audio-video consumer goods.

An important partner in the export and import conducted by ICE ELECTRONUM is the Soviet Union.

ICE ELECTRONUM - Bucharest collaborates with the Soviet enterprises V/O ELECTRONORGTEHNICA, V/O STANKOIMPORT, V/O MASHPRIBORINTORG, V/O TECHMASHEXPORT.

ENERGOMASHEXPORT, V/O TEHNINTORG, V/O

Supplied to the USSR are adjustable drives for machine tools, automatic telephone exchanges, computer technology, while that country exports to Romania electronic components, technological equip-

ment for the electronic industry, computer technology and audio-video consumer goods.

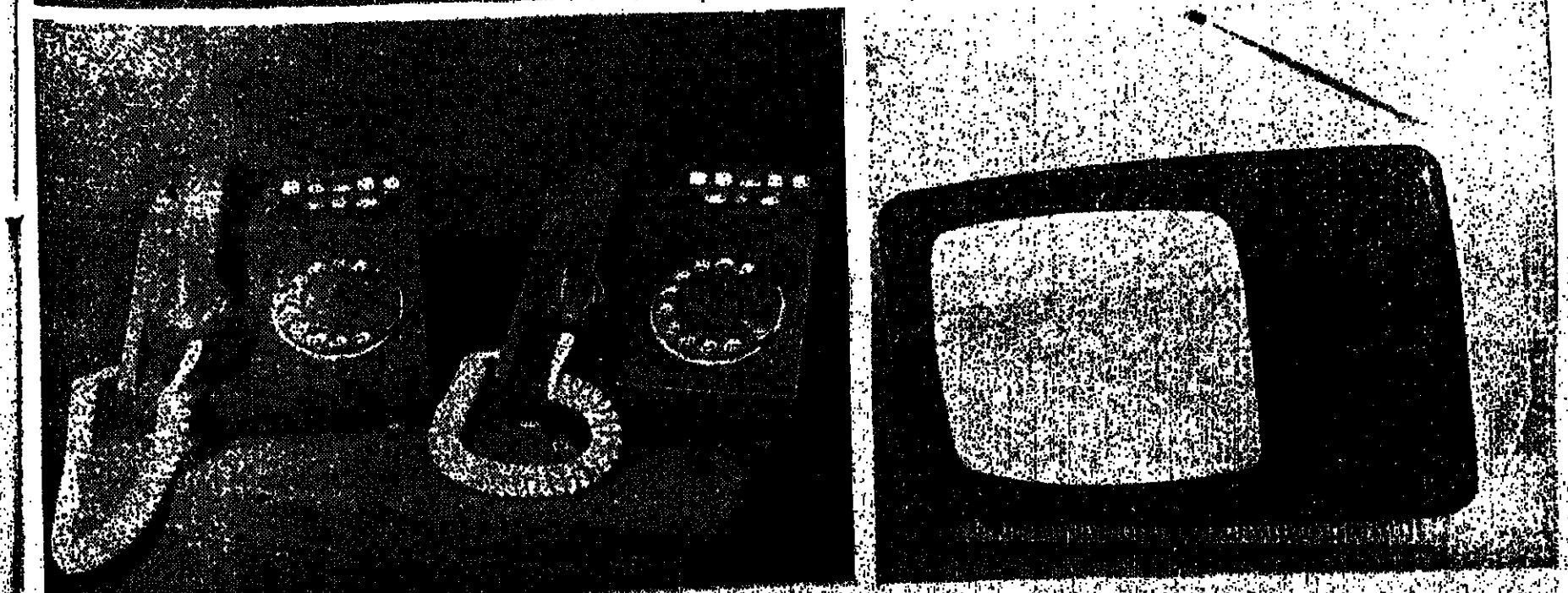
The collaboration with the Soviet foreign trade enterprises also accounts for the cooperation in production, that is Soviet electronic components are used in manufacturing electrical drives, computer technology equipment and automated telephone exchanges to be delivered to the USSR. At the same time very important is the ob-

servance of all delivery dates, especially as concerns the electronic components which are vital to the rhythmic realization of the equipment production plan.

According to annual mutual exchange stipulations, the volume of the exchanges between ELECTRONUM and the Soviet foreign trade enterprises is set to grow every year.

For further information please contact our specialists.

ELECTRONUM
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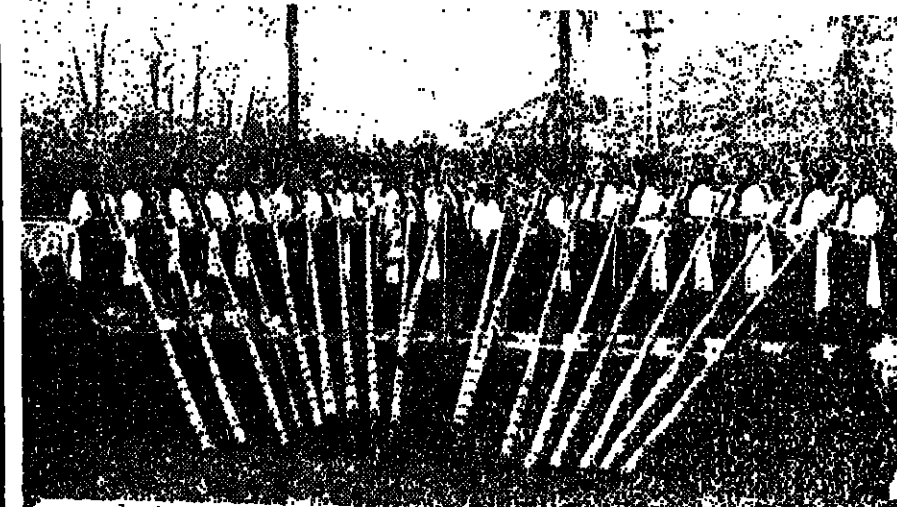
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"SONG TO ROMANIA"

The seventh Song to Romania National Festival mass-wide stage is drawing to an end this month. Since October 1987, the mass phase has offered a stimulating framework for the assertion of new talents, for the promotion of original literary and artistic creation, for scientific research, registering a permanent development and diversification of the content and form of the political-educational, scientific, technical and cultural-artistic work in villages and towns. As part of the mass stage, all counties, economic units and cultural establishments have organized debates, exchanges of experience, exhibitions, symposiums, meetings with specialists in production, laying stress on the expansion of initiatives, on scientific and technical creation.

During the first stage of the ongoing edition the number of artistic ensembles has risen substantially, being a telling proof of the climate of creative emulation generated by the festival. Presently, over 231,000 artistic formations and workshops are taking part in the festival, engaging over five million participants. (Photo right)



CHALET FOR TRIPPERS

Sited at an altitude of approximately 1,500 m, the Poiana Izvorului chalet of the Burest Massif is a well-deserved stop-over for any tourist after two hours' climbing on mountain paths. Moreover, it can accommodate travellers for a longer period. A delightful, picturesque sight providing also a serene cure of quiet and scented air. (Photo right)



CLUJ-NAPOCA PREMIERES

The National Theatre of Cluj-Napoca played host to the premiere of Shakespeare's *Anthony and Cleopatra*. A dense and lively show, marked by the virtuosity of the stage director, actors and scene painter. Stage director Mihai Mănușu's sense of gradation and his unique expression of opening tensions has imposed a

lively, exciting rhythm, full of suspense. Actors Anton Taul (playing Anthony) and Gina Patrîci (Cleopatra), the latter coming from the Lucie Sîrbu Theatre in Bucharest, were depicted by the local press as the ideal couple for the play. The show had the unique chance of bringing together scene painter Mihai

Mădăcu, costume designer Nadia Serbu and composer Ionel Herica who created a suggestive auditive background, with highly effective odd sounds.

As if to confirm its rich and long-standing tradition the Romanian Opera of Cluj-Napoca mounted a highly successful show directed by George Zaharescu, under the baton of Gheorghe Victor Dumănescu, with the contribution of choreographer Victor Vînos and scene painter Gheorghe Codrea, of one of the most famous musicals, Frederick Loewe's *My Fair Lady*.

The charm of famous and always fresh musical creations has recently been confirmed by the Operetta Theatre of Bucharest which has recently staged its 500th performance.



Proiecte planetare (Planetary Projects) is a book recently released by Alexandru Mitrovici and Alexandru Iliu, two admirers of outer space flight, who dedicate their book to young readers; "To our children who will undoubtedly dream of and work on projects imagined by this book in the following century of the human civilization". The stories are accompanied by an original glossary of science fiction terms.

A trimestrial review of the Museum of Romanian Literature, Manuscriptum (the latest issue, no 1, of 1988) devotes a large space to literary documents concerning the Great Union of 1918, authored by Samuil Micu, Teodor Mălar, Samuil Vulcan, Vasile Măgura and Onisifor Ghibu. The "Contemporary Archives" section features new posthumous works by poets Nicolae Labiş and Nichita Stănescu.

HIGH TECHNOLOGY

The hydraulic equipment and tools enterprise in Porsani is one of the newly-built industrial units of Vaslui county. In the hydraulic elements department (photo below) a new Romanian-made automated processing technological line is turning out parts for high-tech machines and equipment.



INGOT LATHE

Standing out among the cutting equipment manufactured by the Suceava enterprise of machine tools is a ring processing lathe. With a maximum 15-lb heavy charge between points a maximum facing diameter of 800 mm and a length between points of 5,000 mm, it is 1.500

impresses through both its capacity of processing highly alloyed steels and its sizes — 10,730 mm in length, 2,230 mm in height and 3,120 mm in width. A giant whose performances are nevertheless controlled and guided by the control panel attached to it. (Photo below)



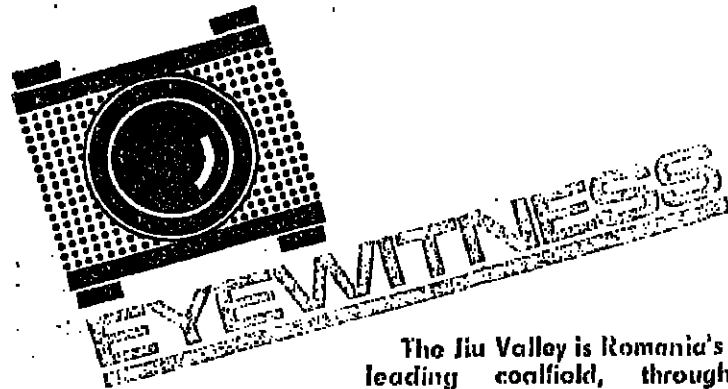
SPORTS

Romania's men's handball champions Steaua Bucharest beat Denmark's champion team L.F. Kolding 23-21 at home and 23-21 away and went through to the quarterfinals of the European Champions' Cup. In the women's competition, Mureșul Tîrgu Mureș won 23-15 the away match against Turkish team Archelik Istanbul, after having outclassed them at home 27-2.

In the Cup Winners' Cup, the men's team Dinamo Bucharest lost the second leg (away) of their tie against TSKA Moxcov 21-23 but had defeated the Soviet champions at home 22-17 and thus strode into the quarterfinals. In the women's competition, Siliștea Bacău (roum) Turkish team Beşiktaş Izmir in both legs — 23-17 at home and 33-13 away. Following their two-leg win (20-17 away and 21-18 at home) over Swiss team St. Gallen Follchelten Timisara went through in the IHF Cup. Mihail Balaș was sent out of that competition by Balaș-Jude of Iceland.

SPRING IN DECEMBER

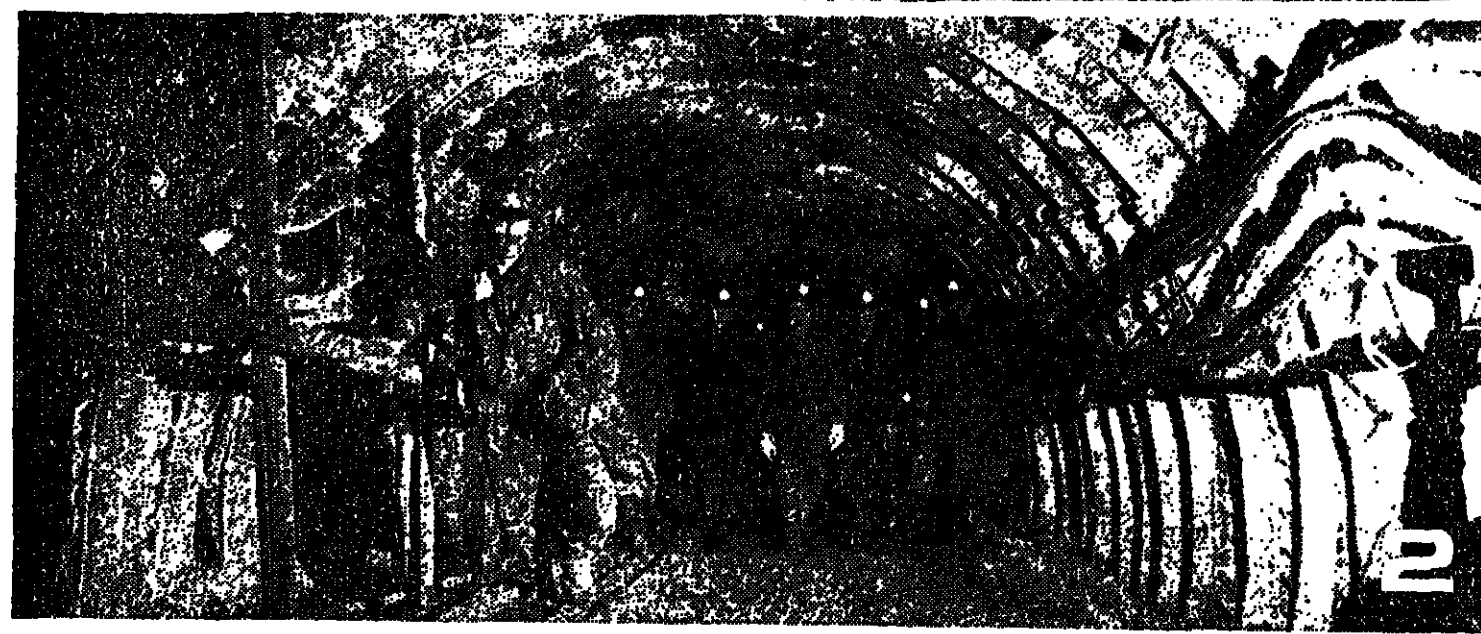
Some five million nurseries (transplants of tomatoes) are being prepared in the hothouses of the Vegetable Growing Research and Production Institute at Vidra, near Bucharest. Regarded under the glass sky of others' hothouses, they will yield fruit, even in the coldest, in the depth of winter. In Romania, the nurseries are the largest. They are the hothouse enterprises.



The Jiu Valley is Romania's leading coalfield, through both its size and the quality of the coal extracted from there: pit coal — the raw material for metallurgical coke and fuel coal of up to 4,500–5,000 calories for thermal power stations. In the underground galleries of the 13 productive enterprises of the mining works operations are conducted with modern mechanized machines.



1 View from the control room of the Lupeni Mining Enterprise. The personnel on duty monitor on TV screens and on the flashing maps of the galleries and mine faces the production flows, the running of conveyor belts, the mining installation, keeping permanently in touch with the men underground.



2 At Lupeni, one more day of fruitful work has been completed. The miners conclude their shift with the feeling of fulfilled duty: they have dug several thousands more tons of coal.



3 View from one of the lecture rooms of the Mining Institute in Petroșani. Here, highly skilled experts are being trained for the mines in the Jiu Valley and the other coalfields in the country.



4 Mechanized cutting machine in a large working face at Lupeni, where the Mining Enterprise, the biggest supplier of coking coal in the country, boasts a high mechanization degree.



5 A forest of underground hydraulic pillars supporting the roof of a mine gallery.

A GENETICIST IS LOOKING AT THE WORLD

An enthusiastic decipherer of the human biological destiny, my collocutor seems to ignore — or maybe he just does not care — that his name is a notorious one. And yet it is precisely the humanist side of his researches that earned him fame: the works of medical human genetics and cytogenetics, the first in this country, which he has published since 1967 and, even earlier than that — the volume Introduction to Anthropology (in collaboration) — the first work of the kind in the specialized Romanian literature, or the Paleoanthropology Monograph — Sărata Monteoru, which has earned him the Prize of the Academy of the Socialist Republic of Romania. The author of over twenty scientific books, he is well known by the Romanian public thanks to the scores of TV or radio broadcasts whose guest he was.

PEOPLE & IDEAS

The entry of his name in the Who's Who in Science and Who's Who in the World, the first monograph devoted to scientific personalities in the world, the discovery and description of certain syndromes — included in international catalogues of hereditary diseases — recommended Constantin Maximilian, MD, as a prominent figure beyond the country's borders too. His record also comprises over 200 articles published not only in Romanian specialized magazines but also in foreign ones such as Journal of Medical Genetics or Acta othologica. His meetings with numerous scientists having the same specialization at international conventions or as a scholarship holder at various genetics institutes in the USA or Europe convinced the Romanian scientist that people on all continents are worried by the same questions about themselves. It was from the responsible involvement that his book of essays, Un geneticist priveste lumea (A Geneticist is Looking at the World) was born. The title, which suggests the author's profession of faith, guided the entire literary of my dialogue with Constantin Maximilian: "Should you resort to a comparison, to what would you compare the advent of genetics as a science?" "With the discovery of fire! Genetics is fantastic because it too participates in transforming the world. And in an essential

way, at that. Nobody imagined that Huxley's Utopia would one day become a reality. The late 60s saw the publication of T. Taylor's Dialogue Time Bomb. Genetics thus became a bomb about to explode. Genetic engineering was drawing near." "During the same period you published 'The Adventures of Genetics'. At that time it was an act of courage." "Yes, those were hot years, seething with questions and incertitudes. Yet an amazing succession of advances which were to transform the planet was heralded. Ever more geneticists left their jobs to look at the future. The emotional impact was tremendous. Then a few biological breakthroughs exceeding the most sensational anticipations were made public. In vitro fertilization took place. That was a decade ago. Today, it is a fact of everyday life. "Let me tell you something. When I left anthropology and started working here at the Endocrinology Institute, I felt the world needed a new human biology — starting from different bases and having higher goals." "Your feeling was quite right. As for in vitro fertilization — should we refer to this alone — it does not yet seem to be quite so everyday as it is hailed by all. Conventional wisdom warns us not to play with fire. The bomb mentioned in the title of Taylor's book suggests certain fear-provoking similitudes. Is the fear justified?"

say that the absurd alone has the chance to be true. But where does the absurd begin?" "As we all know, it once seemed absurd to imagine that man can live with a borrowed heart or kidney. Organ transplants, implantations of electrodes in the brain, the administration of hormones no longer cause any surprise. But up to what point can one extend the scientific slogan 'man changed by man'?" "The human biological stock can still be improved, obviously in its intellectual or emotional sides. Evolutionism is undergoing a crisis, hard to suspect yesterday. We need a new theory. We no longer reduce transformation to the play of mutations and of natural selection. Certainly, today man can improve man. By replacing the rapids — which in the last analysis are just palliatives —, one of the paths leading to the perfection of the human being is to correct the genes, the carriers of hereditary diseases. Failing in this line is the development of definitive therapies. For the time being, however, I think that one of the most fabulous hopes of medicine is the synthesis of specific antibodies 'tailor-made' for maintaining the body's integrity. As it has done before, genetic engineering will again defy the impossible!" "All humans without exception would like to be perfectly healthy, intelligent, young and handsome for as long as possible. I have recently read a special issue of La Quinzaine littéraire an article set on forth some suggestions for the new future of genetic engineering: endowing man with two mouths, two hearts, wings for those desirous to fly, an additional pair of eyes — at the back... Also proposed is to inject the genes of stridor — in order to render people more cooperative and thus eliminate social tension — or genes of intelligence in human embryos in test tubes, with a view to obtaining supergeniuses. After the model of the giant mice obtained through implantations of growth hormone genes, some parents ask doctors to make their children superathletes or



superbasketball players over two meters tall. According to the article, certain biotechnological firms have agreed to meet such demands. "Two-metered people? People with a pair of eyes in the

nano? The suggestions do not come from Utopia. Should we get accustomed to the idea that the human nature will have to be completely changed? Who decides what the 'perfect man' will have to look like?"

A MORAL SCIENCE

"Genetics has never been neutral, not even at the time when it operated with naive concepts. It has constantly wondered where it should stop lest the world's existence should be endangered. I myself wonder for instance what the world would look like if the wise men decide who should live and for how long. A social stratification according to criteria still rejected by imagination could appear. I do not know if this world will ever come into being, but we are in duty-bound to anticipate the possible evolution of science. Will it be aberrant to improve the intelligence question? A species of genes... Will it be absurd to eliminate our fears? It is true that the paths of science are unpredictable. But let us admit, for the sake of hypothetical theories alone, that in the end a small population of supermen will appear. An appropriate environment will have to be created for them. The experiment calls for centuries of permanently guided cross-breeding. Should such an experiment take place, all our moral principles would be violated. Who has the right to impose compulsory unions? What for? What would be the benefits of this?" "Let science should abdicate morals, the adventures of ge-

netics must be rigorously controlled, both from inside the scientific community and from outside it. Generally, the risks of reckless experiments can be eliminated through the participation of all those who are affected. I believe in the role of genetics as a science of life. And I put my hopes on the wisdom of our species." "Speaking of hope, it is no secret that a new book of essays, Genetica, a sequel (The Book of Hope), will soon be published. Will you give us a hint as to its topic?" "It is an attempt to understand the complex paths of the human destiny. The predictable and unpredictable sides of our life." "What is your most ardent wish as a geneticist?" "To discover new syndromes of hereditary diseases. I belong to a generation which has tried to impose genetics in Romanian medicine. And in a large extent it has managed. Genetics takes us closer to the essence of human evolution. Genetics will help us better understand ourselves and the others. Isn't this the great meaning of our existence?"

VIORICA CIORBAGIU

GENETICS-MEDICINE

"The breathtaking ascent of genetic engineering proved to be beneficial to man, meeting the acute needs of medical therapeutics. Through the geneticists' creative power, the bacteria have started producing insulin, which is so necessary (for the time being) to diabetics. Here is another example: until not long ago, hypophyseal dwarfism could be treated with human growth hormone, quite difficult to extract. Genetic engineering stepped in, synthesizing the growth hormone which, beyond its immediate utility, filled a void left by the researches of the great pharmaceutical companies. Several chromosomal syndromes have been identified. In the year 2000, the three billion components of the human genome will be determined. Then we shall better understand why we are what we are, why we are happy or sad, why everyone interprets the world in his own way. It is a fascinating prospect for a species which was just recently born." "A colleague of yours, Marcel Sondrell, who specializes in endocrinology and his virtues of an excellent stylist, noted,

In his book, Săgeata de albastru (The Blue Arrow), the serpent has never before hissed so loud in our ears: 'You shall be like gods!' Tim observation, or maybe the warning, refers to the mutations determined by man by subjecting the chromosomes of the reproductive cells to artificial aggression. Do you share this opinion?" "The answer is more difficult. Genetics continues to be a permanent wonder. However, we can no longer be concerned by its advances alone, but also by their social, moral impact. Because an apparently harmless line of research can branch out and one of its branches could have devastating consequences. Not so long ago, man used to be an intangible being. But here we are faced by 'shleppments' forcing us to reconsider life. When does it start? In the precise moment of fertilization or later? Do we have the right to experiment on an embryo? If the embryo is an integral being, any research on it amounts to a crime. But without fear, the beginning will never be closed up. The new embryology is indeed playing with life."

MAN CHANGED BY MAN

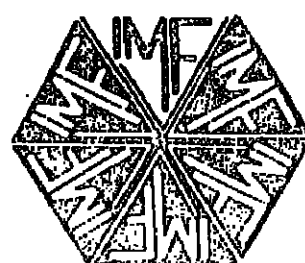


ENDOCRINOLOGY AND GENETICS

The I.O. Părușan Endocrinology Institute is set up by the Romanian scientists who lent his name to it was one of the first establishments of this kind in the world of the time when endocrinology was a young science.

modern treatment regime a polyclinic and so-called 'endocrinology' clinic. The highly-trained medical staff (some of today's best experts were once I.O. Părușan's disciples) will know, abroad too, are working day and night trying to elucidate the causes of endo-

THE FINE MECHANICS ENTERPRISE



YOU CANNOT PRODUCE WELL UNLESS YOU CONTROL!

If, generally speaking, "man is the measure of all things" as Protagoras put it, we must stress that the quality of your products and the productivity of your labour are strictly conditioned by the use of MEASURING AND CONTROL APPARATUS.

The post- or in-process sizing of your products supplies you the information through which you can become EFFICIENT as a producer.

It is this efficiency (viz. quality, producti-

vity, competitiveness) that the Fine Mechanics Enterprise (IMF) of Bucharest has in mind when offering its beneficiaries:

— measuring and control apparatus for lengths, pressures, temperatures, discharges, times and speeds;

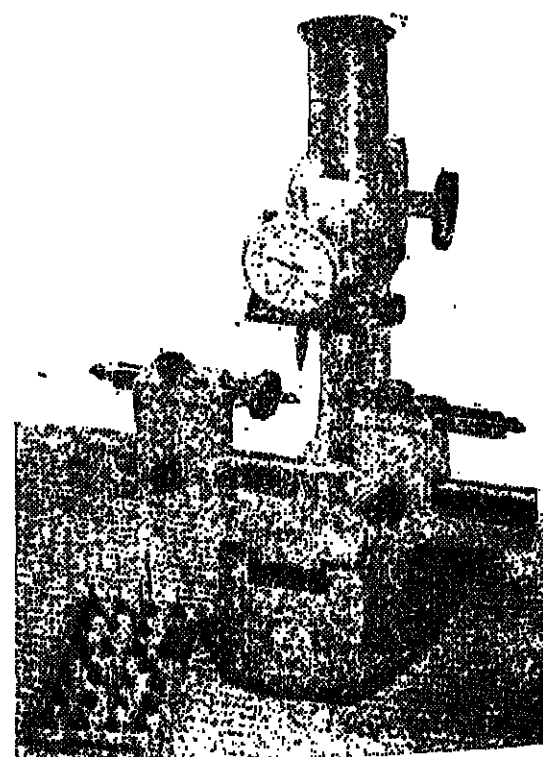
— special tools (diamond and sinter-carbide metal tools), holders, high-accuracy and fineness devices and dies, having a high degree of productivity and durability.



MEASURING AND DIMENSIONAL CONTROL APPARATUS AND INSTRUMENTS

● dial gauges ● bore dial gauges ● gear measuring instruments; ● threaded conic gauges for the oil industry.

● circular dial snap gauges ● gear pitch-error and gear-tooth-thickness measuring instruments ● reading ball-gauges; optical read-out devices and rules.



AUTOMATION ELEMENTS AND MECHANISMS

● Programmers ● electromechanical impulse counters ● programme control for automatic washing machines ● discharge counters with oval wheels ● electromechanical tachographs for motorvehicles ● complex speed measuring installations for locomotives and subways.

FOR PRESSURE INDUSTRIAL CLOCK-TYPE APPARATUS, INSTALLATIONS AND TEMPERATURE CONTROL

This apparatus family includes pressure switches and thermostats. They are indispensable in the automation of starting and stopping installations using fluids whose temperature and pressure must be maintained within certain preadjusted limits. Pressure switches and thermostats are made by the Fine Mechanics Enterprise in a wide variety according to the freezer and type of motors they are mounted on, and the conditions of the environment.



IN- AND POST-PROCESS SIZING GAUGES

● They are built according to modern principles, with pneumatic inductive, piezoelectric transducers, whose signals are processed and displayed analogically or numerically in modular-type electronic units:

● pneumatic post-process sizing gauge — SUPERJET ● pneumatic post-process sizing gauge — ELSUPERJET ● post-process sizing gauge with electric contacts ● inductive electronic post-process sizing gauge ● roughness measuring post-process sizing gauge; smoothness measuring gauge (electronic levels).

● in-process sizing gauge for continuous exterior cylinder surfaces with one and two measuring points ● for continuous exterior surfaces and for continuous interior cylinder surfaces with two measuring points ● in-process sizing gauge for centreless grinding machines ● in-process sizing gauge for exterior diameters of narrow surfaces ● copying systems mounted on machine tools for processing through copying after a pattern.

REMEMBER THE



IMF TRADEMARK



SINTER-CARBIDE METAL PRODUCTS

The main groups of products bearing the "CARME-SIN" mark — which are the object of the Bucharest Fine Mechanics Enterprise's production programme — are the following: sinter-carbide metal brazable tips and inserts for metal cutting; sinter-carbide metal inserts for mining tools; sinter-carbide metal inserts specific to the wood industry, building materials and extraction industry; products for drilling installations; dies for screws and nuts; dies for roll bearings; other types of products upon the foreign partners' demand.

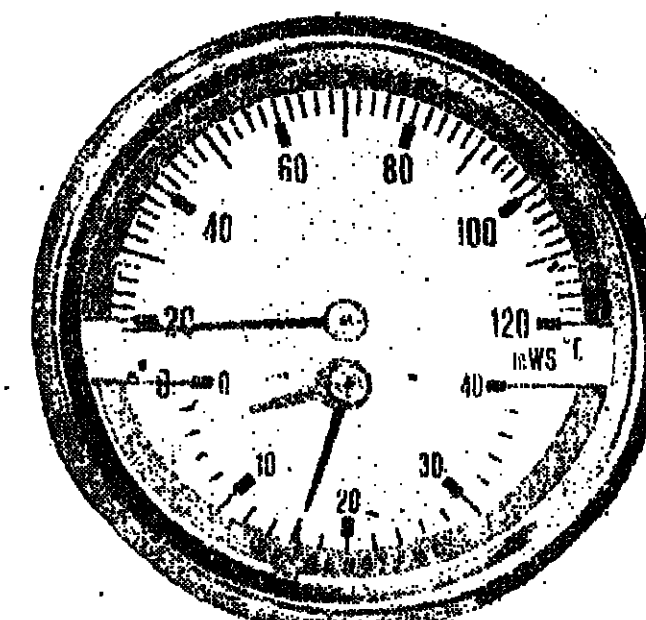
According to the concrete destination indicated by the end user, these products are executed out of the PKMG groups of carbide metal powder, after ISO international standards or according to other requirements specified in the order.

In order to increase the durability and performances of the sinter-carbide metal inserts, the method is applied of coating them with extra-hard layers of titanium carbide, giving the inserts an increased durability of up to 300 percent, as compared to the normal execution.



PRESSURE GAUGES

Through the great diversity resulting from constructive variants based on measuring limits, accuracy, diameter, connection and scale type, the Fine Mechanics Enterprise can satisfy the most exigent demands of its clients (standard pressure gauges or of special construction, upon demand). There are: ● general use industrial manometers ● vibration-proof manometers ● corrosion-proof manometers ● capsule-manometers ● double indication manometers ● manometers-thermometers.



DIAMOND TOOLS

The processing of ferrous and non-ferrous metals, of sinter-carbide metal, stone, concrete, ceramic and glass — through modern methods — calls for the use of diamond tools on an ever larger scale.

The manufacturing programme of this kind of tools is achieved at IMF on the basis of the licence purchased from WINTER firm of West Germany and is currently in full swing as a result of the growing demand. It comprises the following more important groups:

— diamond mills with metallic or resin-

uous binder of various shapes and sizes, with cubic boron nitride.

— diamond tools for construction-material processing

— diamond tools with galvanic binder

— honing diamond blades

— diamond pastes

— diamond tools for trimming and shaping abrasive stones

— chamfering tools with extra-hard materials from diamond polycrystals or cubic boron nitride

— diamond drawing dies.

AND THE EXACT TIME

WHICH YOU CAN LEARN AT ANY MOMENT BY LOOKING AT THE DIAL OF THE WATCH WHOSE TRADEMARK OREX IS A GUARANTEE OF ACCURACY. BUILT IN SEVERAL HUNDRED MODELS BY IMF, THE WATCHES — MECHANIC OR QUARTZ-BASED ANALOG — MEET THE FINENESS OF YOUR AESTHETIC TASTE AND GIVE YOU THE EXACT TIME.



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